

Oct. 11, 2006 Manokotak Trip Report

Departed Naknek 09:40 on King Air with Randy Roberson piloting. Landed Manokotak approx. 10:25. We walked into the village to the power plant where I met with Bob Havemeister and Fin Lyons. Also present were Billy and Isaac, plant operators. I didn't get last names. I had expected to meet Moses, but it was his week off and he was busy working on his rental house. The power plant is powered by four John Deere gensets. Two each 260 KW, one 180KW, and one 120KW. Bob started out by explaining and demonstrating how the plant worked. The plant is checked according to the operations manual 3 times a day by the operator and plant readings are taken. I went over their reading sheets and it looks like they're doing a good job of this. The plant is clean and tidy and in excellent condition.

The plant is controlled by a programmable logic controller (PLC), with operator interface unit (OIU). The PLC determines which unit or units to run according to given load. It takes units on and off line automatically according to the values entered on the OIU for most efficiency. The efficiency according to the PLC was 13.9 KW per gallon. I was impressed by how fast these units were started and put on line and switched around by the controller. Also set in the controller is engine hours to next oil change. When an engine is due for maintenance or oil change the controller takes engine off line and shuts it down until maintenance is performed and controller is reset. I asked if the controller could be reset without maintenance performed and was told yes it could be but was assured by Billy and Isaac that it has not nor will it be done except in an emergency situation. At 2000 hours the maintenance manual says to adjust the valves so I asked Billy if he knew how to do this. He said he had done valves on John Deere engines at the Votec center in Seward so he could do it. Bob is very experienced with these engines and said the valves very seldom need adjustment so advised the crew not to worry about them. Also stated the entire plant was under warranty for the first year and he would do any maintenance beyond oil changes. Bob then showed me the stock of filters and we noticed they were out of air filters for the 2 large engines. I asked Billy if he was aware of this, he said he was and had asked the office to order more, but did not know if they had. I then asked about engine log books for each engine and Billy said he was not aware of any. I explained what engine log books were and their importance then suggested they create some. I'll probably need to call Moses and follow up on this. I then asked where and how they got their oil. Was told that since the larger engines take only 14 gallons and the smaller ones 6 they just buy it a barrel at a time. Bob suggested they buy oil in 5 gallon buckets, several at a time, because the empty buckets are easier to handle and dispose of. No old barrels lying around outside of plant. All used oil is put into a tank that mixes it into the fuel at 1% ratio and is burned by the engines. Bob explained he does this at a lot of plants and it works real well with this type of engine. After a tour inside and outside the plant then over to the tankfarm, picture taking and etc, it was time to go since the plane had to be back in Naknek by 3:30 for the school run. I went back to the office to meet up with Susanne but the office was locked up with Susanne's purse still inside. We had to go to Moses' house to get in the office so I did end up meeting Moses. We retrieved the purse and then Moses gave us a ride to the airstrip on his four wheeler. Arrived back in Naknek at about 2:45.

Recommendations;

- Engine Log Books
- Make an inventory list of all filters used
- Order replacements in timely manner
- Document oil use by engine